

10.1 Continental Drift

Alfred Wegner - hypothesized about the continental drift and pangaia

Fossil evidence - dinosaurs were found in both Africa and South America that were same species and that could not have swam across the ocean

Mid-oceanic ridges- a long undersea mountain range with a steep narrow valley in the middle

Sea-floor spreading- process by which new ocean floor forms as magma rises to Earth's surface and solidifies at mid-oceanic ridges

Henry Hess- developed the theory of sea-floor spreading and supports the theory of plate tectonics

Paleomagnetism- the study of the magnetic properties of rocks

Magnetic Reversals- differences in certain rock's magnetism

Magnetic symmetry- striped magnetic patterns on one side of mid-oceanic ridge and each strip is a mirror image of the other



10.2 The theory of plate tectonics

Vocabulary words:

Plate tectonics- the theory of how large pieces of the lithosphere, called plates, move and change shape

in other words: how plates (large pieces of earth's crust move and change)

Divergent boundary- boundary between tectonic plates that are moving away from each other

Convergent boundary- a boundary that forms when two plates collide

Transform boundary- a boundary where two plates slide past each other horizontally

Convection- movement of a heated material due to differences in density that are caused by differences in temperatures

in other words: the transfer of heat energy through a fluid

Other vocabulary words: ridge push, fracture zones, subduction zones, and island arc

Key Concepts:

The theory of plate tectonics proposes that changes in Earth's crust are caused by very slow movement of large tectonic plates

Earthquakes, volcanoes, and young mountain ranges tend to be located in belts along the boundaries between plate tectonics

Tectonic plates meet at three types of boundaries, which are, convergent, divergent, and transform boundaries

Tectonic plates may be part of a convecting system that is driven by differences in density and heat

10.3 The Changing Continents

Vocabulary Words:

Rifting- the process by which a continent or Earth's crust breaks apart

Terrane - a piece of the lithosphere that has a unique geologic history that differs from the surrounding lithosphere

Supercontinent cycle- the process by which a supercontinent forms and breaks apart over millions of years

Panthalassa- the single large ocean that surrounded Pangea

Accretion- process by which a terrane becomes part of a continent

Other vocab words: Atolls, seamounts

Key Concepts:

Continents grow through the accretion of terranes. Continents break apart through rifting.

Movements of tectonic plates have altered climates on continents which has led changes in the biodiversity on the continents

Continents collide to supercontinents and break apart in a cycle

called the supercontinent cycle

Earth's tectonic plates continue to move and in the future, the continents will likely be in a different configuration